E. P. EARLE.

PENCIL SHARPENER.

APPLICATION FILED MAY 24, 1917.

1,253,221. Patented Jan. 15, 1918.

Fig. 7.

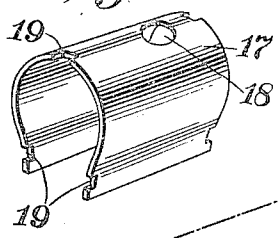


Fig. 1.

Fig. 6.

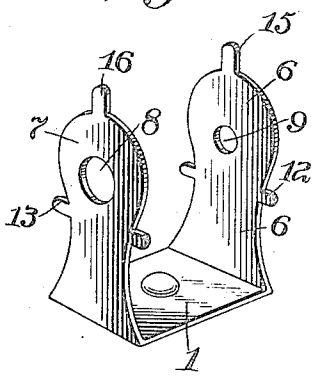


Fig. 2.

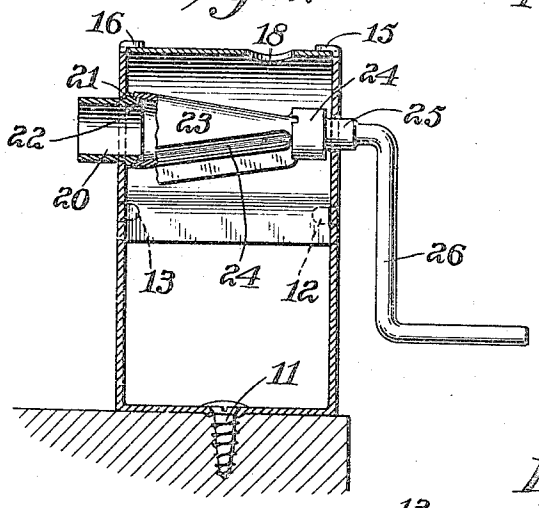


Fig. 3.

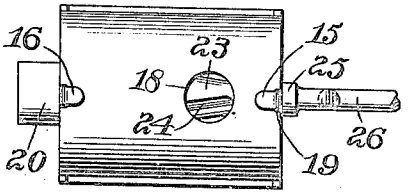


Fig. 4.

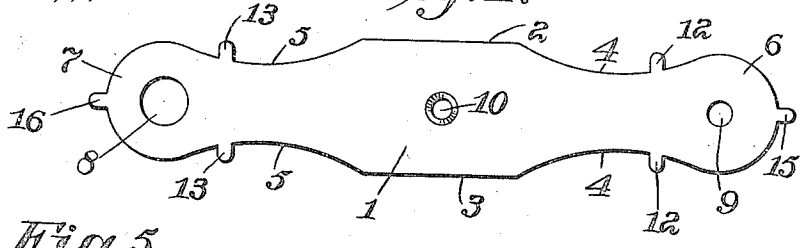


Fig. 5.

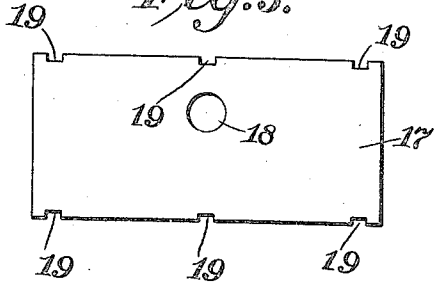
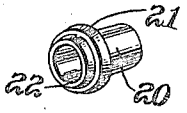


Fig. 8.



Inventor:

Elias P. Earle,

by Parker Cook.

Atty.

UNITED STATES PATENT OFFICE.

ELIAS P. EARLE, OF TOWNVILLE, SOUTH CAROLINA.

PENCIL-SHARPENER.

1,253,221. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed May 24, 1917. Serial No. 170,754.

To all whom it may concern:

Be it known that I, ELIAS P. EARLE, a citizen of the United States, residing at Townville, in the county of Oconee and State of South Carolina, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

My invention relates to a new and useful improvement in pencil sharpeners and has for its object to provide a pencil sharpener that will be extremely cheap to manufacture, easy to construct and efficient in operation.

Another object of my invention is to form the base and housing of the pencil sharpener of but two strips of metal which may be stamped out from two blanks, it necessitating but one operation on each blank to correctly cut out the same and the two blanks then be easily and quickly bent by hand or otherwise, to form the complete base and housing for the cutter.

Still another object of my invention is to provide a pencil sharpener wherein an ordinary or common type of cutter may be used, which cutters are comparatively cheap to buy, so that the entire article, consisting of the base, housing, bearing and cutter and the added cost of labor will amount to but little.

Still another object of my invention is to provide a pencil sharpener wherein there is a little lost motion between the cutter and the bearing so that the point will not be jammed up against the inner end of the cutter which would result in the breaking of the same, and the pencil is capable of a small axial alinement.

Still another object of my invention is to provide a pencil sharpener that will occupy but little space and that may be readily and quickly attached to a desk or other support.

With these and other objects in view my invention consists in certain new and novel constructions and combinations of parts as will be hereinafter more fully described and pointed out in the claims.

Referring now to the drawings forming a part hereof and wherein like numerals designate the same parts,

Figure 1 is a perspective view of the pencil sharpener in its complete or assembled condition.

Fig. 2 is a vertical sectional view with a part of the cutter broken away for the sake of clearness.

Fig. 3 is a top plan view of the same.

Fig. 4 shows the base or support stamped out of a single strip of metal.

Fig. 5 is a plan view of the cut out strip of metal forming the housing.

Fig. 6 is a perspective of the strip shown in Fig. 4 but in its bent up condition.

Fig. 7 is a view of the strip shown in Fig. 5 but likewise in its final bent position and

Fig. 8 is a detail perspective of the bearing for the outer end of the cutter.

Referring now to the several views and Fig. 4 in particular, it will be seen that a strip of metal 1 may be stamped out in one operation to form the base and which base, at its central portion, has the parallel sides 2 and 3. It is then cut away as at 4 and 5, and at the ends the circular portions 6 and 7 are formed. Through the circular portion 7 a piece of metal is stamped out leaving the opening 8 and at the opposite end a piece is also stamped out leaving the somewhat smaller opening 9.

Between the parallel sides 2 and 3 a hole is formed, 10, as shown, for the reception of a screw 11 which will afterward be mentioned.

Formed near each end of the base 1 are the lugs 12 and 13 and directly on the ends of the portions 6 and 7 are the further lugs 15 and 16. This strip of metal is then bent so that the ends 6 and 7 extend in an upright position or at right angles to the base, as clearly shown in Fig. 6.

Referring now for the moment to Figs. 5 and 7, it will be seen that a strip of metal 17 is cut out as shown, which strip forms the housing of the complete article. This strip or housing has the circular opening 18 positioned centrally of its length and along its sides are formed the indentations 19, which indentations are to receive the lugs 12, 13, 15 and 16. The strip 17 is preferably rectangular in shape before bent and is then bent to form the housing as clearly shown in Fig. 7.

Wedged in the opening 8 is the bearing 20, as may be seen in Fig. 2, and this bearing has a flange that forms a stop 21 which contacts with the inner side of the base 1 when the said bearing is forced in the opening 8. Just beyond the lug 21 is a projecting por-

tion 22 which is slightly tapered and forms a conical shaped bearing for the end of a cutter 23, which cutter has the usual knife 24 set at an angle therein.

The other end of this cutter 23 is soldered or otherwise secured to an enlarged projection 24 which is mounted on the small shaft 25, which shaft fits within the opening 9, and to the outer end of this small shaft is the handle 26.

It is to be especially noticed that the enlargement 24 may or may not fit tightly against the inner side of the base 1 or in other words, the cutter 23 and enlargement 24 and shaft 25 may slide laterally for a small distance, the end of the cutter however, remaining on the conical shaped projection 22. The taper of the projection 22 conforms to the taper of the cutter 23, but of course is slightly small in diameter, so that the cutter will revolve freely thereon.

By providing even this small amount of lost motion in the cutter 23 in case the bearing 20 was not put in absolutely at right angles to the base, the cutter 23 will be able to correctly aline itself with the pencil that is placed in through the bearing 20 and in this way avoid breaking the point of the pencil. Furthermore, the point is not as apt to be jammed in the edge of the cutter 23 if there is this slight amount of lost motion.

Formed in the top of the housing 17 is the opening 18 heretofore referred to, the object of the same being that should the point of a pencil become broken or wedged in the cutter 23, a small implement, such as a pin, etc., might be passed through the opening 18 and the broken point of lead forced out of the slot in the cutter 23. Also shavings sometimes collect in this slit in the cutter which may be removed in the above-mentioned manner.

In the opening 10 formed in the base, a screw 11 is soldered or otherwise securely fastened so that to attach the pencil sharpener to a desk or support it is only necessary to place the same on the support and revolve the same until the screw has deeply embedded itself in the support.

To assemble the device after the blanks are cut out and bent as shown in Figs. 6 and 7, the bearing 20 is wedged tightly within the opening 8 and the handle passed through the opening 9. The sides 6 and 7 are then forced inwardly and the housing 17 placed over the ends of the base and the little lugs tightly pressed down within the indentations formed in the said housing.

From the foregoing it will be seen that I have provided a pencil sharpener that is efficient in operation, comprising but a minimum number of parts, the base and housing of which may be struck from a single strip of metal and the labor of assembling the entire article is reduced to a minimum. By providing a slight amount of lost motion, the cutter may move slightly laterally and in this manner prevent the jamming of the point and allow for a small amount of axial alinement, as it is to be remembered that the portion of the bearing 22 is also slightly tapered.

If desired a small piece of paper or card may be slipped through the base of the cutter to receive the shavings.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A pencil sharpener comprising a base struck from a single strip of metal, said strip having its ends bent upwardly to form sides, a housing struck from a strip of metal and bent to form a cover for said base, said housing having an opening formed in the upper portion thereof and means fastened to said base for securing the same to a support, a cutting member within said housing and means for rotating said cutting member.

2. A pencil sharpener comprising a base struck from a single strip of metal and a housing struck from a single strip of metal and secured to said base, a bearing adapted to be wedged in an opening formed in said base strip of metal and the inner end of said bearing provided with a flange and a tapered portion, a conically shaped cutter having one end loosely mounted on said tapered portion and a handle connected to the other end of said cutting portion and said cutter capable of lateral movement as well as rotation by said handle.

3. A pencil sharpener comprising a base and housing each struck from a single strip of metal, said strip having two different sized openings formed in its ends and an opening formed in the center of said strip, a bearing wedged in one of said openings and a shaft loosely mounted in the other of said openings, a conically shaped cutter supported at one end by said shaft and the other end of said cutter loosely mounted on the said bearing, said cutter thereby capable of a slight lateral movement and a handle connected to said shaft for rotating said cutter member.

In testimony whereof I affix my signature.

ELIAS P. EARLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."